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ABSTRACT

A study examined attitudes toward women in nontraditional roles among high school students and staff and identified the training strategies most effective in increasing acceptance of women in these roles. Participants in the study were 759 students (48 percent), teachers (35 percent), and counselors and administrators (17 percent) in 9 school districts in New Jersey. Participants were involved in equity training programs, funded by the New Jersey State Department of Vocational Education, that used career days, guest speakers, job fairs, printed materials, posters, film, and videos. A pretest/posttest control group design was used, along with an instrument that was a semantic differential test on which participants were asked to indicate feelings about women in 10 different nontraditional roles. The results included the following: (1) female respondents were significantly more positive toward women in nontraditional roles on both the pretest and posttest; (2) on the posttest, Caucasians were significantly more positive than African Americans, Hispanics, Asian Americans, or Native Americans; (3) Asian Americans had the least positive attitudes; (4) on the posttest, teachers and administrators were more positive than either counselors or students; (5) no significant changes were found in either counselors or students as a result of training; (6) positive changes were found among students who attended a 2-day workshop for student leaders called Achieving Sex Equity through Training; and (7) ongoing training involving printed materials, posters, films, career awareness programs, and speakers seemed to be the most effective in producing positive attitudes. (CML)

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STUDY TO EXAMINE IMPACT OF GENDER EQUITY TRAINING PROGRAMS ON ATTITUDE EXPRESSED TOWARD WOMEN IN NONTRADITIONAL ROLES

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STUDY TO EXAMINE IMPACT OF GENDER EQUITY TRAINING PROGRAMS ON ATTITUDE EXPRESSED TOWARD WOMEN IN NONTRADITIONAL ROLES

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Nearly two decades after Congress prohibited sex discrimination in education by passing Title IX of the Education Amendments of 1972, American schools still engage in gender biased practices (AAUW, June, 1991). The attitude of vocational educators and students toward women in nontraditional roles was studied to examine the impact of gender equity training projects funded by the New Jersey Department of Adult and Occupational Education. Seven hundred and fifty subjects in nine school districts located throughout New Jersey were asked to describe their feelings about women engaged in nontraditional work situations prior to and following a variety of gender equity training interventions. The most effective training programs in influencing positive changes of attitude were exposure to printed materials, posters, films, career awareness programs, and participation in Gender Ethnic/Expectations and Student Achievement (GESA) workshops. School districts which had ongoing projects showed greater positive changes of attitude than those who were in the first year of their projects. Gender, ethnic/racial background, age, and vocation were found to be significantly related to attitude toward women in nontraditional roles. This research is the first of a five-part study examining barriers to women entering the workforce and was funded by the New Jersey Department of Education, Division of Adult and Occupational Education.

INTRODUCTION

During the 1990-91 academic year, the New Jersey Department of Vocational Education sponsored gender equity training programs in schools throughout New Jersey. Six school districts initiating gender equity projects, two districts with established gender equity projects, and students involved in ASETS training (Achieving Sex Equity Through Students) were studied to examine the effect of training on attitudes toward women in nontraditional roles. The goal of gender equity training in New Jersey is to provide equal access to all vocational education programs for both females and males, in order to prepare all students for the challenges of Workforce 2000. This study examined whether gender equity training for educators and students resulted in the attitude changes necessary to facilitate bias free career choices among students.

The purpose of this research project was to examine attitudes toward women in nontraditional roles and to determine what kinds of training strategies are most effective in increasing acceptance of women in these roles. Changing patterns of participation in the labor force reflect the changes in our culture as a whole. Traditional assumptions about roles of men and women are gradually shifting, but stereotypical thinking still prevents many from actively seeking a nontraditional career because of the stigmas placed upon that choice. The net effect of these stereotypes has been to deny both women and men the opportunity to pursue a career which is both emotionally and financially rewarding (Chatterjee and McCarrey, 1989; Zylinski and Wagner, 1987). By identifying the attitudes of professionals and students involved in gender equity projects, the resultant training programs can be designed in a more effective manner.

The Carl D. Perkins Vocational Education Act, P.L. 101-392 and the changing focus of work and family roles require that the techniques and strategies used by gender equity programs be examined in relation to developing positive attitudinal changes among vocational educators and vocational counselors. Programs can then be designed or revised to be more responsive to the needs of target

populations. While the law is very specific in defining sex discrimination, punishable by loss of funds for a school district, educators and counselors have been slow to help remove the barriers which exist for students in schools when they choose an occupational program or even a course, that is considered nontraditional for their gender (AAUW, 1991; Epler, 1982; Pottker and Fiskel, 1977; Price and Borgers, 1977).

Research has indicated that teachers treat male and female students differently (Jones, 1989; Cooper, 1987) and that counselors react negatively to young women interested in nontraditional roles and encourage them to follow typical vocational paths (Harmon, 1989; Epler, 1982; Farris, 1982). Learning in the classroom is influenced by teachers' interactions with students and how teachers communicate is based on their beliefs and expectations for individuals and groups (Jones, 1989; Epler, 1982; Braun, Neilson, and Dykstra, 1975). Research indicates that gender-stereotyped attitudes and behaviors of educators are influential in perpetuating stereotyped attitudes and expectations of students (Farris, 1982; Epler, 1982). The literature also indicates that continued information concerning vocational and other educators' sex stereotyped knowledge, attitudes, perceptions and behaviors is critical if vocational education is to provide equitable treatment for all students. The general consensus among practitioners in the field of gender-equity training is that extended training exposure coupled with inclass experience is the most effective method of changing attitude and behavior of teachers (Farris, 1982; Epler, 1982).

TRAINING INTERVENTIONS

The school districts included in the survey research provided a wide variety of intervention experiences to the participants in their projects. Some schools targeted their activities to professional staff while others worked primarily with students. Leaders in the school districts providing training programs were asked what kinds of materials and interventions they had used in training.

Films were frequently used as interventions. Several school districts mentioned showing such films as *Myth Busters, Sending the Right Signals, Making Points, Career Alternatives, Unique Opportunities for the Year 2000,* and *Sex Equity in the College Classroom, Still Killing Us Softly, and Stale Rolls* and *Tight Buns*. These are available through the New Jersey Department of Adult and Occupational Education. A wide variety of printed materials were also used. Frequently the presentations were teacher made and included publications available through the New Jersey State Department of Adult and Occupational Education. Cartoons and newspaper articles collected by the teachers were used to enhance discussions with students. *Challenging the Stereotype: Activities for the Classroom* was found to be helpful to teachers in planning programs, and this material is also available through the New Jersey Department of Adult and Occupational Education.

Several schools conducted programs which involved bringing in outside speakers and panelists for in school programs targeted to both professional staff and students. The speakers were individuals who had been particularily successful in pursuing a nontraditional career—college students enrolled in nontraditional majors and business leaders. The participants in these programs were asked to serve as panelists and as discussion leaders. ASETS students who had completed gender equity training were also asked to participate in school programs for fellow classmates by providing skits, participating in role playing, and serving as leaders for student discussion groups.

The programs presented to the individual school districts varied widely. The types of activities provided were identified by generic terms for the purpose of examining the effect of each type of experience on attitude change. The printed materials used would not necessarily have been the same for each school district. The only types of training which were universal to all districts were ASETS and GESA training (Gender Ethnic, Expectations and Student Achievement). GESA is an intensive six week course for teachers designed to increase their sensitivity to gender equity issues

and to make them more aware of teaching practices and techniques which may not be equitable for all students). The ASETS and GESA training sessions were interschool programs which were offered in regional centers.

METHOD OF STUDY

The study was conducted using a pretest/posttest, control group design. Participants were students, teachers, counselors, and administrators in six school districts receiving funding from the New Jersey Division of Vocational Education to initiate gender equity training projects during the 1990-91 school year. Two additional schools which had established gender equity programs and students involved in ASETS training were assessed to examine attitude change following the various types of training interventions.The school districts were situated throughout the state and included urban and rural areas. The training interventions provided by the individual school districts varied. In some cases the programs were directed almost exclusively to students, and in others, to professional staff. A control group was selected to include representatives from teacher and student groups. The participants in the control group did not participate in a formal gender equity training program during the test period. However, some respondents in the control group did receive some training as a result of their general professional and personal activities.

Data Collection

The data collection instrument used, The Situational Attitude Scale, was developed by Sedlacek and Brooks (1972) of the University of Maryland to measure racial bias. Adapted versions have been used over the last decade to measure sex role bias, age bias, and racial attitudes. The Situational Attitude Scale used in this study varies with the occupation of the person in the situation rather than race or age. The occupational titles used were selected from a list of job titles identified as masculine (occupations in which women were in the minority on statistics from the Labor Department Women's Bureau, 1975). The occupations cited were professional and semi-professional. The respondents were asked to react on a semantic differential scale by indicating feelings about women in each of ten situations. Each of the ten situations was scored separately. Because the internal consistency of the instrument was high, the total mean score measuring attitude was used for analysis rather than the separate situational scores. The instrument was administered to the participants twice: once before training and again following the completion of training activities. (See Appendix A for test instrument.)

Pretest questionnaires were mailed to the participating school districts during the early fall of 1990 so that they could be administered before training started. The questionnaires were administered in group situations by the local program administrator at the beginning of the initial training session. Data collection took place throughout the fall as each program began. The training programs which took place during the late fall and winter were designed and conducted by each local school system.

At the conclusion of the gender equity training projects, in late springof 1991, a posttest was administered to the participants. The post-test was to be administered in a group situation by the program administrator to the same respondents who had participated in the pretest. Because respondents did not always provide adequate identification to be matched on pre and posttests, the data were analyzed by groups rather than case by case.

FINDINGS

During the 1990-91 academic year, 759 participants (students, teachers, counselors, and administrators) in eight school districts throughout New Jersey participated in the study. The participants were involved in gender equity training programs which have been funded by the New Jersey State Department of Vocational Education.

The results of the analysis of the findings are presented in three parts: (1) demographic information; (2) test variables; and (3) relationships between variables. Demographic data is presented in Figure 1 showing the frequency and percentage of the sample for each variable. The test variables, attitude toward women in nontraditional roles and types of training intervention experienced, are shown in Figure 2. The relationships between the demographic variables and the test variables and between test variables are shown in line graphs comparing the pretest and the postcenttest findings. A significant change in the attitude expressed was found for some demographic groups and for some of the training interventions. Findings at the .05 level of significance were accepted as significant relationships and those at the .01 level as highly significant.

Demographic Information

Each subject was asked to complete a questionnaire requesting demographic information. The purpose of collecting this data was to examine how these factors might be related to the attitudes expressed.

Age

The ages of the subjects in the study ranged from 14-65 years, with an average age of 30 years. The largest group, 48 per cent, were students and were less than 20 years of age. The second largest group, 23 per cent, were from 41-50 years of age. The 31-40 year old participants formed the third largest group and comprised 11 per cent of the sample. The distribution of subjects by age is shown in Figure 1.

Vocation

The largest number, 48 per cent, of the subjects participating were students. The second largest group, 35 per cent, were teachers. Administrators and counselors represented the remaining 17 per cent of the sample. The distribution of subjects by vocation is shown in Figure 1.

Education

The educational level of the subjects ranged from high school students to professionals with post baccalaureate degrees. The largest group, 48 per cent, was high school students, still attending school. Twenty six per cent of the subjects held master's degrees, 14 per cent bachelor's degrees, 10 per cent professional certification, and 2 per cent doctoral degrees. The distribution of the subjects by educational level is shown in Figure 1.

Income

The family income of participants in the study ranged from $15,000 to over $55,000 per year. Fifty per cent of the subjects reported income over $55,000. Eighty-eight percent of the subjects had a family income of over $25,000 per year. Twelve percent reported their family income to be less than $25,000 per year. See Figure 1 for distribution of subjects by family income.

Ethnicity/Race

The majority, 54 per cent, of the participants were Caucasian. The second largest group, 25 per cent, were African-American. Hispanic American participants formed the third largest group and comprised 15 per cent of the sample. Four percent of the sample were Asian Americans and 1 per cent were American Indians. See Figure 1 for distribution of the sample by ethnic/racial group.

Vocational Education Program

Subjects were asked to indicate if they were currently involved in a vocational education program and whether they had previously been enrolled in any vocational education programs or workshops. Forty three percent indicted that they were currently in vocational education programs and 26 per cent indicated that they had previously been involved in vocational education. See Figure 1 for involvement in vocational education programs.

Figure 1. Demographic Characteristics of Sample.

	pre-test n = 414		post-test n= 345		control n=73	
	n	%	n	%	n	%
Vocation						
Administrator	41	10	24	7	2	3
Teacher	137	34	123	37	36	51
Counselor	26	6	34	10	2	3
Student	201	50	155	46	32	43
Education						
BS	70	17	36	11	19	26
MS	92	23	103	31	15	21
Prof. Certification	23	6	33	10	4	6
Doctorate	10	2	3	1	1	1
Student	212	52	161	48	32	46
Gender						
Female	250	65	223	68	39	57
Male	132	36	103	32	29	43
Income						
$15-24999	30	9	45	15	4	6
$25-34999	40	12	42	14	10	16
$35-44999	51	16	34	11	5	8
$45-55999	37	11	35	12	12	18
>$55000	164	51	144	48	32	52
Age						
<20 years	186	49	127	48	33	48
21-30	19	5	6	2	8	12
31-40	53	14	18	7	9	13
41-50	82	22	67	25	13	19
51-60	31	8	35	13	3	5
61-70	8	2	10	4	2	3
Ethnic/Race						
African-American			81	25	9	29
Caucasian			173	54	17	64
Asian			12	4	1	4
Native American			4	1	0	0
Hispanic			49	15	1	3
Current Involvement in Vocational Education Program						
yes	170	43	146	45	5	7
no	225	57	178	55	65	93
Previously Involved in Vocational Education Program						
yes	65	17	121	38	4	6
no	324	83	195	62	64	94

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TEST VARIABLES

Attitude Toward Women in Nontraditional Roles

Attitude was measured as the participants' response on a semantic differential scale depicting women in ten different nontraditional roles. The subject was asked to indicate feelings or attitudes about each situation by indicating the word which best described their feelings. The word descriptors were arranged in such a way that on some of the questions the word on the left indicated the most positive feelings and in other cases the most negative. The middle position between the two descriptor words was considered to be a neutral response. The instrument was scored from one to five with five being the most positive response, one the most negative, and three neutral.

The pretest attitude scores ranged from 1.14 to 4 with the majority of the subjects, 66 per cent, responding in the neutral category. Twenty eight percent of the respondents were in the somewhat positive group. The average pre-test score was 2.68. On the posttest the scores ranged from 1.81 to 3.68 with the majority of participants, 63 per cent, again in the neutral category and 30 per cent in the somewhat positive group. The average posttest score was 2.71. See Figure 2 for distribution of participants in pre and posttest attitudes.

Figure 2 Distribution of General Attitude Expressed on Pre- and Post- Tests.

	pre-test n=373		control n=41		post-test n=314		control n=31	
	n	%	n	%	n	%	n	%
General Attitude:								
Positive	0	0	0	0	0	0	0	0
Somewhat Positive	105	28	13	32	95	30	10	32
Neutral	246	66	26	63	196	63	21	68
Somewhat Negative	4	22	2	5	23	7	0	0
Negative	0	0	0	0	0	0	0	0

Level of Exposure to Training Interventions

Subjects were asked to describe approximately how much time they had spent in gender equity training experiences during the past academic year. They were given specific amounts of time and descriptions of the types of activities which would be included for each level of intervention. Forty eight subjects, 15 per cent, responded that they had no experience while 9 per cent, said they had very high levels of training. Most of the respondents, 75 per cent, categorized themselves as having low to high levels of exposure. See Figure 3 for level of exposure to training experiences as reported by respondents

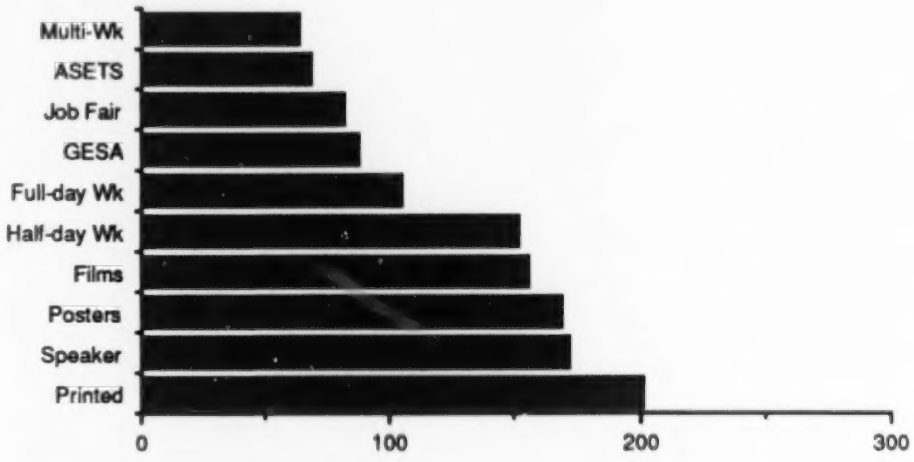
Figure 3. Level of Exposure to Training.

	f	%
none	48	15
low	93	29
moderate	103	32
high	44	14
v. high	30	9

Training Interventions

Subjects experienced a wide variety of gender equity training. They were asked to indicate all the types of training experiences they had participated in during the past academic year. In most cases they indicated experience with more than one type of intervention. The most frequently reported type of experience was distribution of printed materials, such as pamphlets and brochures, followed by posters and films. See Figure 4 for the types of experiences reported.

Figure 4. Frequency of Types of Training Experiences.



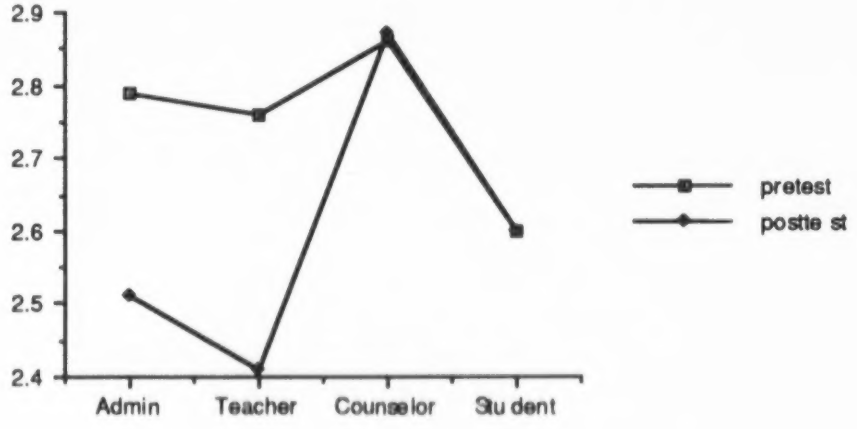
RELATIONSHIPS BETWEEN VARIABLES: ATTITUDE AND DEMOGRAPHIC CHARACTERISTICS

Analysis of the relationships between attitude and demographic characteristics indicated:

Attitude and Vocation

On the pretest (F (3,401)=5.52, p .001) the attitudes of teachers, counselors, and administrators were found to be significantly more positive than those of students. Posttest results indicated administrators and teachers to be more positive than either counselors or students (F(3,335)=3.55,p .0147). No significant changes were found in the counselor or student groups as a result of the training. See Figure 5.

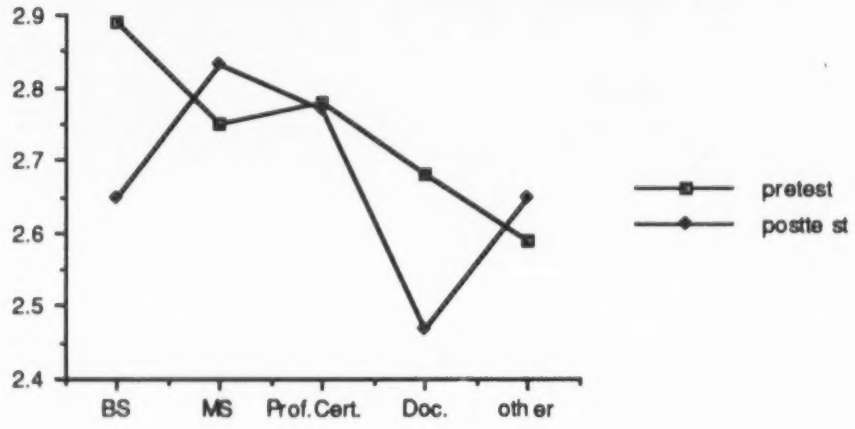
Figure 5. Attitude Expressed on Pre- and Post- Tests as Related to Vocation.



Attitude and Level of Education

Education was found to be significantly related to attitude on both the pre ($F(4,402)=6.71$, p .0001) and posttest ($F(4,331)=2.9$, p .0221). On the pretest the most positive scores were exhibited by those with Bachelor's Degrees and the least positive by students. Students' attitudes were found to be significantly less positive than either those with Bachelors or Masters degrees on the pre-test. On the post-test, respondents with masters degrees were found to have a more positive attitude than other groups. The only respondents who became more positive on the post-test were those with Masters degrees and high school students. See Figure 6.

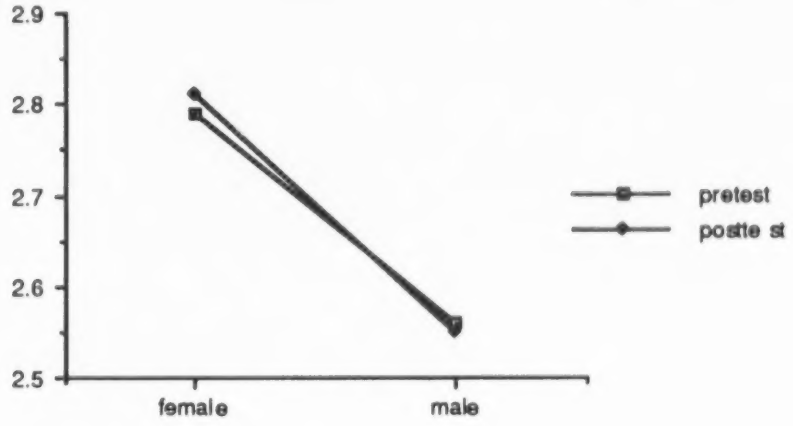
Figure 6. Attitude Expressed on Pre and Post tests as Related to Level of Education.



Attitude and Gender

Female respondents were significantly more positive than male respondents on both the pre- (F (1,380)=20.38, p .0001) and posttest (F (1,325)= 22.47, p .0001). However, both groups showed an insignificant change in attitude as a result of training. See Figure 7.

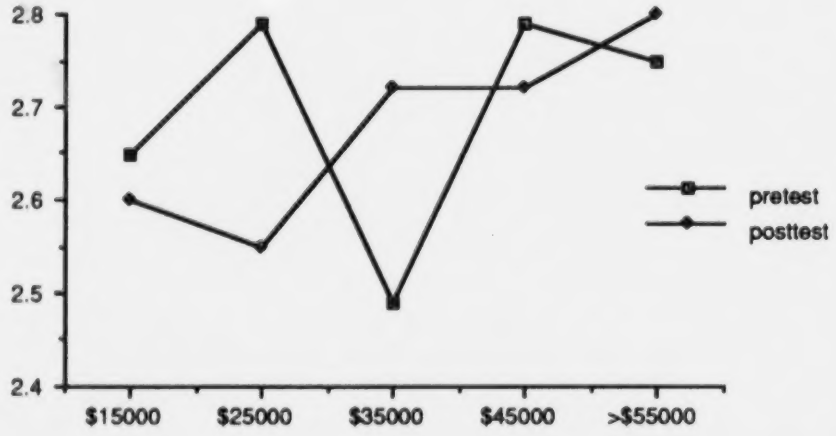
Figure 7. Attitude Expressed on Pre- and Post- Tests as Related to Gender.



Attitude and Income

Income was also significantly related to attitude on both the pretest ($F(4,322)=4.08$, p .003) and posttest ($F(4,295)=3.22$, p .0132) portion of the study. On the pretest, subjects in the $25,000 and $45,000 ranges were the most positive while those in the $35,000 category tended to be less positive. Following training, those in the $35,000 and $55,000 income levels became somewhat more positive while those in the other groups expressed a less positive posttest attitude. Generally, as income went up, the respondents expressed a more favorable attitude. See Figure 8.

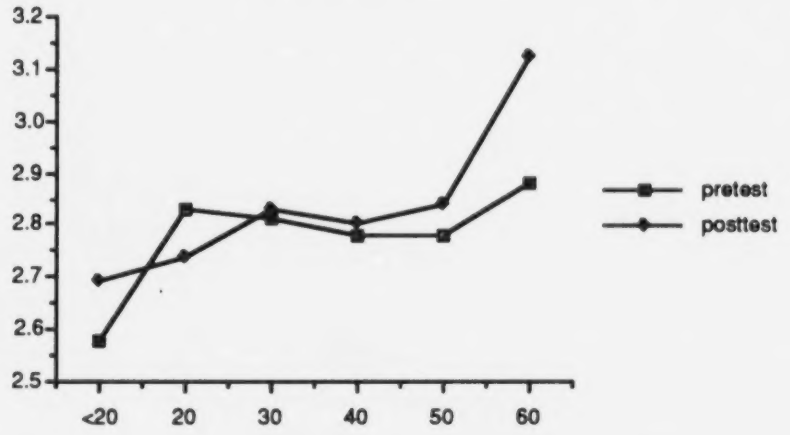
Figure 8. Attitude Expressed on Pre- and Post-Tests as Related to Family Income.



Attitude and Age

Age was significantly related to attitude on the pretest ($F(5,373)=4.3$, p .0008) and tended to be related on the posttest ($F(5,257)=2.11$, p .0649). Subjects under 20 years of age were found to be significantly less positive than any other age group on the pretest. Although the student group was also less positive than other age groups on the posttest, the difference was not significant. Generally a positive relationship existed between age and attitude. Older participants tended to be more positive on both the pre and posttests. See Figure 9.

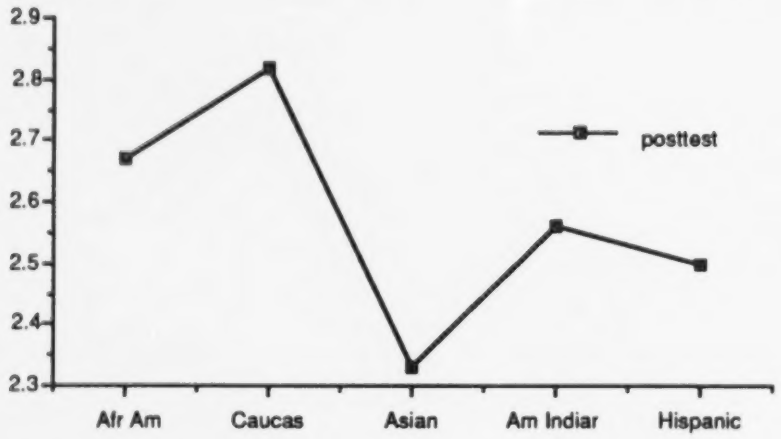
Figure 9. Attitude Expressed on Pre- and Post-Tests as Related to Age.



Attitude and Ethnic/Racial Group

Ethnicity/race was found to be significantly related to attitude (F(4,314)=7.03, p .0001). On posttest scores Caucasian respondents exhibited significantly more positive attitudes than African Americans, Asian Americans, or Hispanic respondents. The less positive responses of Hispanic, African American, and Asian groups may be attributed to cultural values which are not supportive of women being employed in nontraditional roles. See Figure 10.

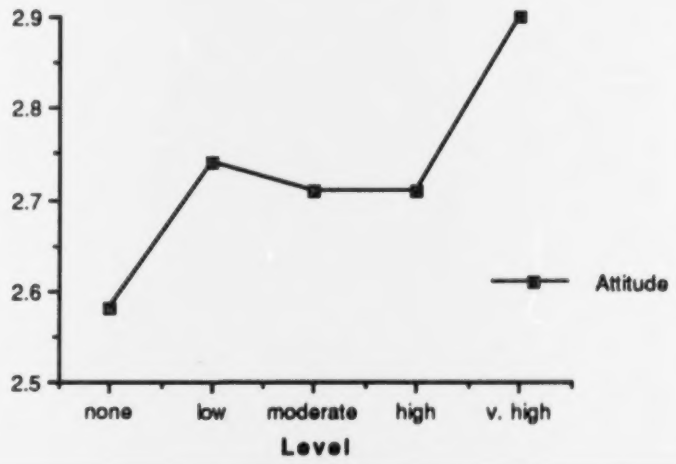
Figure 10. Attitude Expressed on Post Test as Related to Racial/Ethnic Background.



Attitude and Level of Training Experienced

Subjects with no gender equity training experience tended to be less positive than those with very high levels of exposure to training activities ($F(4,313) = 2.21$, p .0677). Very high levels of training included GESA and other intensive experiences over an extended period of time. As the amount of time spent in training increased, attitude became more positive. See Figure 11.

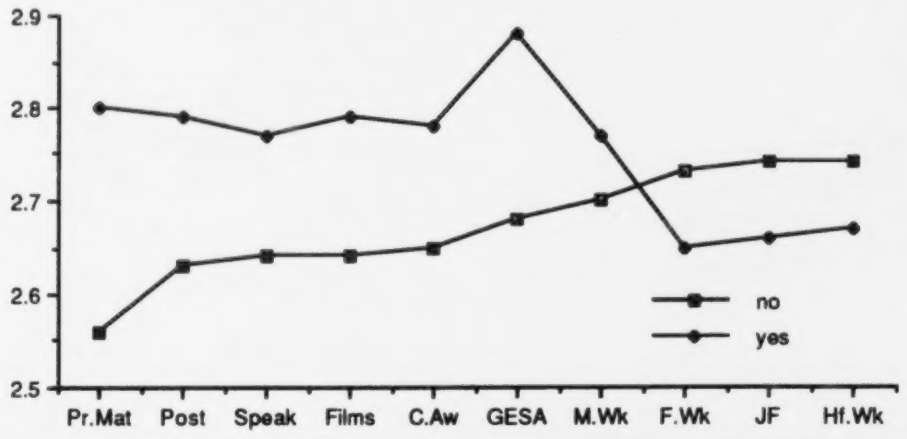
Figure 11. Attitude Expressed on Pre- and Posttests as Related to Level of Training Experience.



Attitude and Type of Training Experienced

Examination of the relationships between test scores and type of intervention indicated that participants who cited printed materials (t=4.65, p .0001), posters (t=3.03, p .0026), films (t=2.96, p .0034), career awareness programs (t=.0121, p .0121), GESA training (t=2.56, p .011), and speakers (t=2.26, p .0247) were significantly more positive on the post-test than those respondents not reporting these types of interventions. Subjects who reported job fairs, half and fullday workshops were less positive than those who did not experience these types of interventions. See Figure 12.

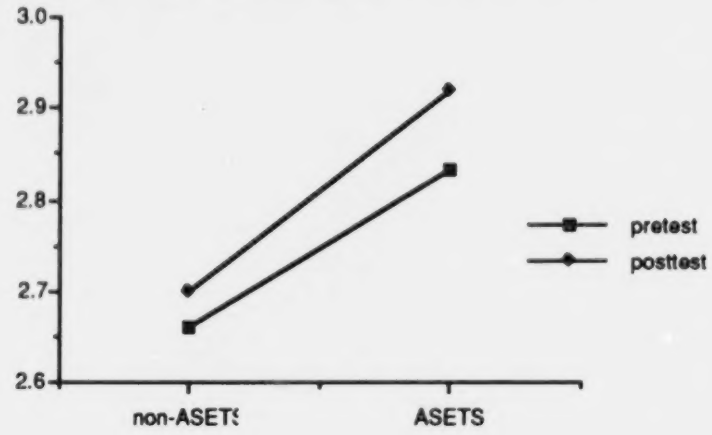
Figure 12. Posttest Attitude as Related to Type of Intervention Experienced.



Attitude and Exposure to ASETS training for students

ASETS students were found to be significantly more positive than nonASETS students on both the pre ($F(1,412) = 5.96$, p .0151) and posttests ($F(1,308) = 3.72$, p. 0547). Because of logistical problems, the ASETS students tended to take the survey during or immediately following ASETS training rather than prior to training. Although the researchers sent attitude instruments to the supervising teachers to be administered to the students prior to ASETS training, this often was not possible because the participants were not identified in sufficient time for the teachers to administer the tests. Consequently, the teachers tended to administer the test following training as a posttest rather than before training started. The scores of ASETS students should be considered to be posttest scores. Because there were no pretest ASETS scores available, the average all-student pretest score was used as the basis of comparison. See Figure 13.

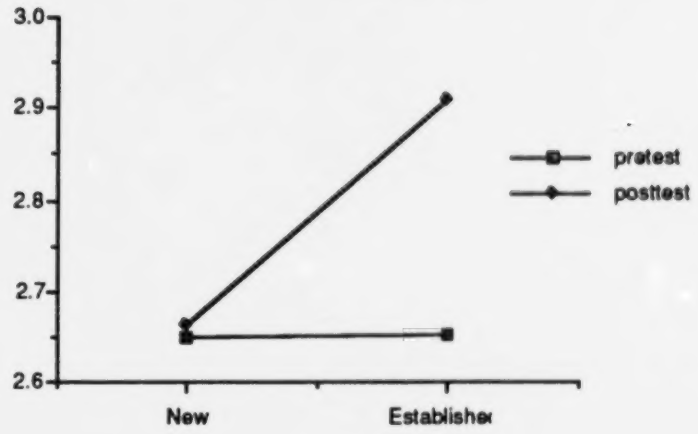
Figure 13. Attitude Scores for ASETS students.



Attitude as Related to Established vs New Training Programs

Schools which started gender equity training this year were compared to those schools having established programs which had been operating for more than one year. The participants from the schools with ongoing programs were found to have significantly more positive attitudes ($F(1,290) = 9.81$, p .0019) than the participants from schools in their first year of operation. The types of training experiences offered seemed to be similar. The differences can be attributed to the difficulty of changing attitudes. In order to be effective, the findings of this research indicate that programs need to operate over an extended time period.

Figure 14. Attitude Scores Related to Length of Program .



Subgroups of participants were examined individually to determine which training strategies were most successful. Subjects in the teacher, student, Caucasian, Hispanic, and male groups who were exposed to print materials were found to exhibit significantly higher posttest scores than subjects not exposed to printed materials. Exposure to films was significantly related to more positive posttest scores for administrators, counselors, Caucasians, Hispanics and females. GESA training was particularly influential for female teachers.

Figure 15. Significant Interventions for Selected Demographic Groups.

	Intervention						
	Speaker	Print	Posters	Films	Career Day	Full Wk	Multi Wk GESA
Group:							
Administrators	x		x				
Teachers		x		x	x		x
Counselors						x	
Students		x		x			
African-Am							
Caucasian		x	x	x	x		x
Asian							
Native-Am							
Hispanic	x	x		x	x		
Female		x	x	x	x		x
Male	x	x	x				

SUMMARY

Traditional assumptions about roles of men and women are gradually shifting, yet, stereotypical thinking still prevents many from actively seeking nontraditional careers. The purpose of this study was to investigate the impact of gender equity training on the attitudes of students, teachers, counselors, and administrators. Research supports the belief that gender stereotyped attitudes and behaviors of educators are influential in perpetuating stereotyped attitudes and expectations of students.

The findings of this research project confirm the data reported in the literature suggesting a significant difference between the sex stereotyped attitudes of male and female educators, with female educators having the more positive attitudes (Kellet and Haradine, 1981; Cunningham, 1981; Hantjis, 1977). Teachers treat boys and girls differently. Consciously or unconsciously they convey the message that certain types of activities are more appropriate for boys than for girls and vice versa. Research suggests that sex stereotyped attitudes of educators are influential in perpetuating stereotyped attitudes and behaviors among students. Both educators and students need to be encouraged to guide women into a wider variety of career roles. Children tend to reflect the values and attitudes of the culture in which they are raised and those of the important people in their lives. Future training efforts need to be targeted to these influential people, i.e. teachers, counselors, peers and parents.

Findings of the research indicated that some sub-groups are significantly more positive towards women in nontraditional occupations, than others and that these same subgroups are the ones most willing to change their minds in a positive direction following training. The most positive subgroup was Caucasian females. They became even more positive following training. Unfortunately, groups which were neutral or negative on the pretest were found to be resistant to changing their opinion. Training interventions needs to be targeted to these groups.

Students were among the most negative groups on the pretest. However, ASETS training was associated with positive posttest scores. The findings of this study suggest that students may be one of the most effective target groups for future training. Their attitudes, although formed by their high school years, may be more flexible than those of adults. An interesting finding was that, although not statistically significant, young professionals were more negative following training while student and older age groups became more positive.

Professionals with Bachelors degrees had less positive attitudes than respondents with more advanced degrees. Females were significantly more positive than males. As level of income increased subject's attitudes were significantly more positive. Caucasian subjects were the most positive while the least positive groups were those of Asian and Hispanic origin.

Respondents who stated that they had been exposed to gender equity printed materials, posters, films, career awareness programs, GESA, and speakers demonstrated significantly more positive attitudes on the posttest than respondents not reporting these types of activities. Although respondents experiencing job fairs, full and half day workshops had less positive scores on the post-tests, the differences were not statistically significant.

The success of training efforts, although found to vary in effectiveness, seemed to be even more highly related to the effect of sustained interventions. Schools which had established gender equity programs had significantly higher posttest scores than those with new programs. When questioned about the type of training experiences they were offering, the leaders in established programs indicated many of the same types of interventions which were used in new programs. This similarity of programs suggests that changing of attitudes is a process which must take place over an extended period of time in much the same way that socialization takes place. The group within which the person lives, works, and studies must become sensitive to gender-equity issues. Treating people equally must become the norm. In order for all students, male and female, to feel free to seek the career best suited to their needs, society must accept and encourage non-gender stereotyped acceptance of a wider variety of roles.

Reccomendations

Training interventions need to be targeted to student and young professional populations. Although students in general were resistant to changing their attitudes, those students who were involved in ASETS programs exhibited a significantly more positive attitude toward women in nontraditional roles than students not involved in ASETS training. The results for all groups indicate that participants in ongoing gender equity projects had significantly more positive attitudes than those in new projects. Attitudes are difficult to change. Schools interested in effecting attitude change will need to commit themselves to on-going programs.

Although printed materials were most often associated with positive attitude change, a wide variety of interventions were experienced by most participants. Exposure to gender equity issues and materials over time appears to be more important than a particular type of intervention. Intensive training sessions, such as ASETS, were associated with positive changes for students. Generally, GESA training was associated with positive changes in attitude. The group which exhibited the greatest positive attitude change was Caucasian female teachers. However, male teachers exhibited a more negative attitude following GESA training.

While the results of this study clearly indicate that there were positive changes in attitude among many individuals, these changes alone do not indicate behavioral change on the part of vocational educators or students. Further research is needed to assess the long term impact of gender equity training.

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Participating School Districts:
Bayonne Public Schools, Essex County Vocational Technical School, Gloucester County Vocational Technical School, Mercer Country Vocational Technical School, Montclair Public Schools, Middlesex County Vocational Technical School, Paramus Public Schools, Pinelands Regional School, Union County Vocational Technical School.

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